

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte FRANCIS EDWARD FISHER and RUSSELL BOWLES

MAILED

MAY 26 2005

U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Appeal No. 2005-0999  
Application No. 09/939,356

ON BRIEF

Before KIMLIN, OWENS and WALTZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 and 3-10, all the claims pending in the present application.

Claim 1 is illustrative:

1. A composite heat sink device for surface mounting to a circuit board, said device comprising:

a heat sink body consisting essentially of aluminum, said body comprising at least two mounting lands with respective substantially planar bottom surfaces which are coplanar to each other, and

at least two discrete thermally conductive solderable elements mechanically fixed to respective said mounting lands, each said element having a first planar surface which is contiguous with a respective said planar bottom surface of said heat sink body and an opposed second planar surface for soldering to said circuit board, said first and second planar surfaces being substantially parallel.

The examiner relies upon the following references in the rejection of the appealed claims:

Rosenbaum <sup>1</sup>	2,965,819	Dec. 20, 1960
Takahashi	5,528,456	Jun. 18, 1996
Pavlovic	6,055,158	Apr. 25, 2000
Pei et al. (Pei)	6,230,789	May 15, 2001
(filed Jun. 25, 1999)		

Appellants' claimed invention is directed to a heat sink device that is mounted to the surface of a circuit board. The device comprises a body that consists essentially of aluminum having two mounting lands, and thermally conductive solderable elements that are mechanically fixed to the mounting lands. One set of the solderable elements is mechanically fixed to and contiguous with the planar bottom surface of a mounting land, while the opposite surface of the solderable element is soldered to the circuit board.

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<sup>1</sup> It is noted that the examiner has not listed the Rosenbaum reference in the Prior Art of Record in the Answer. However as Rosenbaum is relied upon in the rejection of claims 6 and 7, we view this as a harmless error.

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Appealed claims 1, 3-5 and 8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Takahashi. Claims 1, 3-5 and 8 also stand rejected under 35 U.S.C. § 102(b) as being anticipated by Pavlovic. In addition, claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavlovic in view of Rosenbaum, whereas claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Takahashi or Pavlovic in view of Pei.<sup>2</sup>

Appellants submit at page 6 of the brief that "claims 1-8 will stand or fall together", whereas claims 9 and 10 are separately patentable. Accordingly, claims 2-8 stand or fall together with claim 1.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we find that the examiner's § 102 rejections of claims 1, 3-5 and 8 are well founded, as is the examiner's § 103 rejection of claims 6 and 7. We will not, however, sustain the examiner's § 103 rejection of claims 9 and 10.

We consider first the examiner's § 102 rejections. There is no dispute that both Takahashi and Pavlovic describe a composite

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<sup>2</sup> The examiner has withdrawn the rejections over Bollesen, Villaume and Katsui (see page 5 of answer, first paragraph).

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heat sink device for surface mounting to a circuit board wherein the body of the device consists essentially of aluminum and comprises at least two mounting lands. The dispute arises over whether the references describe mechanically fixing solderable elements to the mounting lands such that it is contiguous with the bottom surface of the lands. It is appellants' contention that the soldering step of Takahashi and the adhesive bonding step of Pavlovic do not meet the claim requirement of "mechanically" fixing. Appellants point out that the mechanical fixing disclosed in the present specification does not include soldering and adhesive bonding, and the dictionary definition of "mechanical" pertains to the use of machines or tools. The examiner, on the other hand, cites Fujine et al., Patel et al. and Scheuerer et al. as objective evidence that the claim language "'mechanically fixed' is an art recognized term to mean attaching heat sinks to electrical components by soldering and adhesives" (page 5 of answer, second paragraph).

It is by now well settled that claim language during ex parte prosecution is to be given its broadest reasonable interpretation and that limitations in the specification are not to be read into the claims. In the present case, appellants do

not contest the examiner's objective evidence that the term "mechanically fixed" is a recognized term in the art for soldering and adhesive bonding heat sinks to electrical components. Also, appellants do not point to any particular definition in their specification for the claim language "mechanically fixed". Rather, appellants cite Teleflex Incorporated vs. Ficosa N. Am. Corp., 63 USPQ 2d 1374 (Fed. Cir. 2002) for the proposition that the patents cited by the examiner "constitute *extrinsic evidence* which may not properly be considered in determining the meaning of words in a claim" (page 2 of Reply Brief, first paragraph). According to appellants, "[t]he words used in a claim are interpreted in light of the *intrinsic* evidence of record, including the written description, the drawings, and the prosecution history" (*id.*)

The Teleflex case cited by appellants certainly supports the argument that *intrinsic* evidence for interpreting claim language includes the written description and drawings of a specification, as well as the prosecution history. However, appellants erred in stating that the court excludes prior art patents in determining the meaning of claim language. Indeed, the court explains that

while the meaning of claim language may be established by reviewing intrinsic evidence such as the written description and prosecution history, as well as dictionaries and treatises, it must be borne in mind that "in any event, the ordinary meaning must be determined from the standpoint of a person of ordinary skill in the relevant art", citing Zelinski vs. Brunswick Corp., 185 F.3d 1311, 1316, 51 USPQ2d 1590, 1593 (Fed. Cir. 1999), (Teleflex at 1380). Accordingly, rather than ignore the patent cited by the examiner as extrinsic evidence, as urged by appellants, we must fully consider such evidence in determining the ordinary meaning of "mechanically fixed" to a person of ordinary skill in the art of attaching heat sinks to electrically components. Hence, since appellants do not contest the examiner's objective evidence of prior art patents that the phrase "mechanically fixed" includes soldering and adhesive bonding, we find that both Takahashi and Pavlovic describe the claimed mechanical fixing within the meaning of § 102.

Appellants also contend that the soldering and bonding of Takahashi and Pavlovic respectively preclude the surfaces of the solderable elements from being "contiguous" with the bottom surface of the mounting lands. Appellants maintain that the dictionary definition of "contiguous" requires touching.

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However, appellants do not refute the examiner's finding that "[t]he term 'contiguous' can mean direct or indirect contact" (page 6 of answer, first paragraph). Since appellants' specification does not assign a particular definition to the term "contiguous", and one of the accepted definitions of contiguous is "near", we agree with the examiner that the broadest reasonable interpretation of the claim language "contiguous" does not result in a patentable distinction over the disclosures of Takahashi and Pavlovic.

Appellants do not offer a separate substantive argument for the § 103 rejection of claims 6 and 7 over Pavlovic in view of Rosenbaum.

We will not sustain the examiner's § 103 rejection of claims 9 and 10 over Takahashi or Pavlovic in view Pei. Claims 9 and 10 require that the mechanical fixing comprises inserting projections on the lands into the sockets of the solderable elements, and appellants contend that the solderable elements in each of Takahashi and Pavlovic are integrated circuit packets that "are delicate structures which could not withstand the forces involved in fitting a projection into a socket in an interference fit" (page 11 of principal brief, last paragraph). While "[t]he

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examiner acknowledges appellants' concerns in the physical incorporation of Pei et al. in the devices of Takahashi or Pavlovic" (page 6 of answer, third paragraph), the examiner cites five additional patents to support the conclusion of obviousness. However, since the additional citation of Griffis, Gottbreht, Ngo, Horton and Jordon is an improper incorporation of evidence by the examiner, they will not be considered here in determining the propriety of the examiner's rejection. It is axiomatic that prior art evidence relied upon by the examiner must be cited in the statement of the rejection. In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970). Should the examiner consider claims 9 and 10 to be unpatentable under 35 USC § 103 over the collective teachings of the cited prior art, prosecution should be reopened upon return of this application to the examiner.

In conclusion, based on the foregoing, the examiner's rejections of claims 1 and 3-8 are affirmed, and the rejection of claims 9 and 10 is reversed. The examiner's decision rejecting the appealed claims is affirmed-in-part.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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